

**DEPARTMENT OF TRANSPORTATION****DIVISION OF ENGINEERING SERVICES**

Office of Structural Materials

Quality Assurance and Source Inspection



Bay Area Branch

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Contract #: 04-0120F4Cty: SF/ALA Rte: 80 PM: 13.2/13.9File #: 1.28**WELDING INSPECTION REPORT****Resident Engineer:** Casey, William**Address:** 333 Burma Road**City:** Oakland, CA 94607**Report No:** WIR-027004**Date Inspected:** 06-Jan-2012**Project Name:** SAS Superstructure**OSM Arrival Time:** 700**Prime Contractor:** American Bridge/Fluor Enterprises, a JV**OSM Departure Time:** 1530**Contractor:** American Bridge/Fluor Enterprises, a JV**Location:** Job Site**CWI Name:** See below**CWI Present:** Yes No**Inspected CWI report:** Yes No N/A**Rod Oven in Use:** Yes No N/A**Electrode to specification:** Yes No N/A**Weld Procedures Followed:** Yes No N/A**Qualified Welders:** Yes No N/A**Verified Joint Fit-up:** Yes No N/A**Approved Drawings:** Yes No N/A**Approved WPS:** Yes No N/A**Delayed / Cancelled:** Yes No N/A**Bridge No:** 34-0006**Component:** SAS**Summary of Items Observed:**

12W-pp114-W3-1

The QA Inspector randomly observed the ABF welder identified as Todd Jackson and ABF helper begin fitting up the lifting lug deck insert identified above. The QA Inspector noted the direction of rolling was stamped with a low stress stamp in the center of the insert plate, so no grinding or welding would mask or deface the identifying marking. The QA Inspector randomly observed the bevel angle to be 45°. The QA Inspector noted the surface of the bevel appeared to be a machined surface with bright shiny metal. The QA Inspector noted the ABF welder was utilizing a prefabricated round copper backing plate held in place with magnets. The QA Inspector noted the fit up was completed on the QA Inspectors shift and appeared to be in general compliance with the contract documents. The QA Inspector randomly observed the Smith Emery (SE) Quality Control (QC) Inspector Salvador Moreno inspect and accept the fit up prior to production welding. The QA Inspector randomly observed the ABF welder begin the SMAW root pass. The QA Inspector randomly observed the SMAW parameters were 5/32" E7018 low hydrogen electrodes with 195 Amps for the root pass. The QA Inspector noted the parameters appeared to be in general compliance with ABF-WPS-1050A-cu. After the SMAW root pass was completed the QA Inspector randomly observed the welder switch to 3/16" E7018 low hydrogen electrodes with 275Amps and used through the completion of the weld. The QA Inspector randomly observed the ABF welder did not complete the above identified lifting lug hole on the QA Inspectors shift.

11W-pp101-W3-2,3,4

Upon the arrival of the QA Inspector at the above identified location, the ABF welder Mike Jimenez was observed excavating and repairing the above identified weld joint. The QA Inspector randomly observed the ABF welder excavate the previously rejected areas utilizing a burr bit grinder and a grinding disc. The QA Inspector noted the

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rejected areas were previously indicated with a distinguishing marking indicating the location of the weld defects. Once the areas were excavated and ground to a weldable profile, the QC Inspector Salvador Moreno performed magnetic particle testing of the excavations. The QC Inspector informed the QA Inspector no relevant indications were located at the time of the testing. The QA Inspector randomly observed the ABF welder preheat the excavated areas and the surrounding base material to 100F prior to performing the SMAW repair. The QA Inspector randomly observed the ABF welder begin the SMAW repairs utilizing 1/8" E7018 low hydrogen electrodes and 118 Amps. The QA Inspector randomly observed and noted the weld repairs were completed on the QA Inspectors shift. After the repairs were completed the QA Inspector observed the ABF welder grind the weld reinforcement flush with the base metal.

### Hinge B expansion Joint CCO-193

The QA Inspector observed ABF personnel cut back the top and side skin plate and diaphragm plate using an oxyacetylene cutting torch on a track system and also observed the ABF personnel use a mechanical cutting blade on the existing bottom soffit plate of the bike path box panel. The QA Inspector no welding was performed on this date.



### Summary of Conversations:

The SE QC Inspector Bonifacio Daquinag informed the QA Inspector that an ABF welding representative excavated and welded an R2 repair in the 13W/14W A2 weld segment without prior engineering approval. The QC Inspector informed the QA Inspector, an internal non conformance report (NCR) would be written and submitted by the QC department. The QA Lead Inspector Danny Reyes informed the QA Inspector Rick Bettencourt that an incident report would be generated and submitted by Caltrans QA for the above identified incident.

### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Nina Choy 510-385-5910, who represents the Office of Structural Materials for your project.

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**Inspected By:** Bettencourt,Rick

Quality Assurance Inspector

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**Reviewed By:**      Levell,Bill

QA Reviewer